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IS 15979 (2012): Cyphenothrin, EC - [FAD 1: Pesticides and Pesticides Residue Analysis]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
साइफेनोथ्रिन, ई सी — विशिष्टि

Indian Standard
CYPHENOTHHRIN, EC — SPECIFICATION

ICS 65.100.30

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Pesticides and Pesticides Residues Analysis Sectional Committee had been approved by the Food and Agriculture Division Council.

Cyphenothrin, EC is used as an insecticide in agriculture.

Cyphenothrin, EC is generally manufactured to contain 5 percent (*m/m*) of cyphenothrin.

In the formulation of this standard, due consideration has been given to the provisions of the *Insecticide Act*, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under the *Insecticides Act* and Rules, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

CYPHENOTHHRIN, EC — SPECIFICATION

1 SCOPE

This standard prescribes the requirements, and the methods of sampling and test for cyphenothrin, EC.

2 REFERENCES

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
1070 : 1992	Reagent grade water – Specification (<i>third revision</i>)
1448 [P : 20] : 1998	Methods of test for petroleum and its products: [P: 20] Determination of flash point by Abel apparatus (<i>second revision</i>)
6940 : 1982	Methods of test for pesticides and their formulations (<i>first revision</i>)
8190 (Part 2) : 1988	Requirements for packing of pesticides: Part 2 Liquid pesticides (<i>second revision</i>)
10627 : 1983	Methods for sampling of pesticidal formulations
15978 : 2012	Cyphenothrin, technical — Specification

3 REQUIREMENTS

3.1 Constituents

3.1.1 The material shall consist of cyphenothrin, technical dissolved in suitable solvent(s) together with emulsifying agent(s) and with or without stabilizers.

3.1.2 Cyphenothrin, technical employed in the formulation of this material shall conform to IS 15978.

3.2 Physical

The material shall comply with the physical requirements specified in **3.2.1** to **3.2.4**.

3.2.1 Description

The material shall be a clear, stable, pale yellowish homogenous liquid and free from sediment and/or suspended matter. It shall readily form an emulsion,

on dilution with water, suitable for spray.

3.2.2 Cold Test

No turbidity or separation of solid or oily matter, or both, shall occur when the material is subjected to the cold test at 10°C as prescribed in **13.1** of IS 6940.

3.2.3 Flash Point (Abel)

When determined by the method prescribed in IS 1448 [P: 20], the flash point of the material shall be above 24.5°C.

3.2.4 Emulsion Stability

Any separation including creaming at the top and sedimentation at the bottom of 100 ml of emulsion, prepared in standard hard water with 2.0 ml of EC, shall not exceed 2.0 ml, when tested by the method prescribed in **13.3** of IS 6940.

3.3 Chemical

The material shall comply with the chemical requirements specified in **3.3.1** and **3.3.2**.

3.3.1 Cyphenothrin Content

When determined by the method prescribed in the Annex A of IS 15978, the observed cyphenothrin content, percent (*m/m*) of any of the samples shall not differ from the declared nominal value by more than the percent tolerance limits given below:

<i>Nominal Value</i>	<i>Tolerance Limits</i>
Percent	Percent
Up to 9	+10
	–5
Above 9 and below 50	±5
50 and above	+5
	–3

} of the nominal
value

3.3.1.1 The actual value of cyphenothrin content in the formulation shall be calculated to the second decimal place and then rounded off to the first decimal place before applying the tolerances given in **3.3.1**.

3.3.2 Acidity

When determined by the method prescribed in **13.5** of IS 6940, acidity (as H₂SO₄) of the material shall not be more than 0.5 percent by mass.

4 PACKING

The material shall be packed in clean and dry containers made of aluminium or tin plate, properly and suitably lacquered from inside. The container shall also meet the general requirements given in IS 8190 (Part 2).

5 MARKING

5.1 The containers shall be securely closed and the following information shall be marked legibly and indelibly on each container in addition to any other information as is necessary under the *Insecticides Act*, 1968 and Rules framed thereunder:

- a) Name of the material;
- b) Name and address of the manufacturer;
- c) Batch number;
- d) Date of manufacture;
- e) Date of expiry;
- f) Net quantity;
- g) Nominal cyphenothrin content, percent (*m/m*);
- h) Cautionary notice worded as in the *Insecticides Act*, 1968 and Rules framed thereunder; and
- j) Any other information required under the *Standards of Weights and Measures (Packaged Commodities) Rules*, 1977.

5.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

5.2.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act*, 1986

and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian standards.

6 SAMPLING

When freshly manufactured material in bulk quantity and/or the retail pack of the formulated product is/are offered for inspection, representative sample of the material shall be drawn and tested as prescribed in IS 10627, and if tested within 90 days of its date of manufacture, the criteria for conformity shall be that the contents in percent (*m/m*), shall not be less than the declared nominal value. The upper limit for conformity shall be the same as those given in **3.3.1**. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627, however, the criteria for conformity of the material, shall be the limits of tolerances, as applicable over the declared nominal value and given under **3.3.1**.

7 TESTS

7.1 Tests shall be carried out by the methods referred to in **3.2.1** to **3.2.4**, **3.3.1** and **3.3.2**.

7.2 Quality of Reagents

Unless specified otherwise, pure chemicals and reagent grade water (*see* IS 1070) shall be employed in the tests.

NOTE – ‘Pure chemicals’ shall mean chemicals that do not contain impurities, which affect the results of analysis.

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Amendments Issued Since Publication

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